To: Laura Blake[Laura.Blake@cadmusgroup.com]
Cc: MICHIE Ryan[Michie.Ryan@deq.state.or.us]; Jeff Maxted[Jeff.Maxted@cadmusgroup.com]; 'Andrew Somor' ?[Andrew.Somor@cadmusgroup.com]?[Andrew.Somor@cadmusgroup.com]; Wu, Jennifer[Wu.Jennifer@epa.gov]; Carlin, Jayne[Carlin.Jayne@epa.gov]
From: BRANNAN Kevin
Sent: Mon 4/8/2013 1:37:48 PM
Subject: RE: Mid-Coast Work - Assess stream access and structure locations using LIDAR and NHD

Hi Laura,

Your approach is good with me. I won't be in the office today, but will be tomorrow.

Thanks,
Kevin

From: Laura Blake [Laura.Blake@cadmusgroup.com]
Sent: Monday, April 08, 2013 6:17 AM
To: BRANNAN Kevin; 'wu.jennifer@epa.gov'; 'carlin.jayne@epa.gov'
Cc: MICHIE Ryan; Jeff Maxted
Subject: RE: Mid-Coast Work - Assess stream access and structure locations using LIDAR and NHD

Hi Kevin

Jeff said the methods for this are well-described in the document you sent last week. I'm working on developing estimated costs (to share with Jayne). However, we won't know with certainty how long this task will take as later steps (adding events with the HEM tool) will depend on the number of events produced during the LiDAR processing. However, I'm fairly confident our budget can cover any potential scenario; still, I will give Jayne the best projections I can develop.

With regards to our approach. Given our tight schedule, there's a chance we may not complete all of this work for the basin. So, we propose a similar approach as we are using for the road digitizing, which is to develop a solid protocols document, and then complete as much of the work as possible before the task order ends (and hopefully we can complete it entirely).

Laura

From: BRANNAN Kevin [mailto:BRANNAN.Kevin@deq.state.or.us]
Sent: Friday, April 05, 2013 12:38 PM
To: Jeff Maxted
Cc: Laura Blake; MICHIE Ryan
Subject: RE: Mid-Coast Work - Assess stream access and structure locations using LIDAR and NHD

Hi Jeff,

I modified the task description to include the steps in the process (see attached). Let me know what you think. We made need to do some additional processing of the LIDAR data on our end to get the First and Last return data.

Cheers,
Kevin

From: Jeff Maxted [mailto:Jeff.Maxted@cadmusgroup.com]
Sent: Thursday, April 04, 2013 2:19 PM
To: BRANNAN Kevin

Cc: Laura Blake
Subject: RE: Mid-Coast Work - Assess stream access and structure locations using LIDAR and NHD

OK – thanks for the update!

Have a nice evening,
Jeff

Jeff Maxted | Associate
The Cadmus Group, Inc.
16 N. Carroll Street, Suite 900 | Madison, WI 53703
Office: (703) 842-5519 or (608) 250-1920
www.cadmusgroup.com<http://www.cadmusgroup.com/>

From: BRANNAN Kevin [mailto:BRANNAN.Kevin@deq.state.or.us]
Sent: Thursday, April 04, 2013 4:18 PM
To: Jeff Maxted
Subject: RE: Mid-Coast Work - Assess stream access and structure locations using LIDAR and NHD

Hi Jeff,

I won't be able to get you the write-up on the LIDAR data processing until tomorrow.

Kevin

From: Jeff Maxted [mailto:Jeff.Maxted@cadmusgroup.com]
Sent: Thursday, April 04, 2013 12:25 PM
To: BRANNAN Kevin
Cc: Laura Blake
Subject: RE: Mid-Coast Work - Assess stream access and structure locations using LIDAR and NHD

Hi Kevin,

Are you completely booked after 1:30pm PDT today? Our call will likely take 15 minutes or less.

Thanks,
Jeff

From: Laura Blake
Sent: Thursday, April 04, 2013 1:17 PM
To: BRANNAN Kevin; Jeff Maxted
Subject: RE: Mid-Coast Work - Assess stream access and structure locations using LIDAR and NHD

Jeff

Kevin's availability is below. Can you please schedule a time to talk with him directly (today, preferably).

Thanks,
Laura

From: BRANNAN Kevin [mailto:BRANNAN.Kevin@deq.state.or.us]
Sent: Thursday, April 04, 2013 12:26 PM
To: Laura Blake

Subject: RE: Mid-Coast Work - Assess stream access and structure locations using LIDAR and NHD

Hi Laura,

I am available anytime expect 11:30AM-1:30PM PDT today.

Cheers,
Kevin Brannan
Natural Resource Specialist
811 SW 6th Ave
Portland, OR 97204
Phone: 503-229-6629
Email: brannan.kevin@deq.state.or.us<mailto:brannan.kevin@deq.state.or.us>

From: Laura Blake [mailto:Laura.Blake@cadmusgroup.com]
Sent: Thursday, April 04, 2013 8:21 AM
To: BRANNAN Kevin
Subject: RE: Mid-Coast Work - Assess stream access and structure locations using LIDAR and NHD

Hi Kevin

What is your availability like today for a quick call with me and Jeff to talk through this task? Jeff has a few questions, best discussed via phone.

Laura

From: BRANNAN Kevin [mailto:BRANNAN.Kevin@deq.state.or.us]
Sent: Wednesday, April 03, 2013 5:57 PM
To: 'Wu, Jennifer'; Laura Blake; Jayne Carlin
Cc: FOSTER Eugene P; MICHIE Ryan
Subject: Mid-Coast Work - Assess stream access and structure locations using LIDAR and NHD

Hi All,

Here is a short write-up of the work I proposed during our call earlier today:

The goal of this work would be to assess the potential direct loading of bacteria to streams in the Big Elk Creek watershed using local LIDAR data and put these locations in NHD format using the Hydrography Event Management (HEM) tool. The HEM tool is used to add or edit events in the NHD. The two potential sources to be considered are riparian areas with stream access for animals and structures located near streams. The assessment will generate polygon and line vector data will be generated from the assessment. The HEM tool will be used to put the information created from the LIDAR data into the format that is used in the NHD. This will allow for the linking of the local data to all of the other data in the NHD. Furthermore, the HEM tool facilitates updates of local information to any modifications that occur for the NHD. ODEQ has the LIDAR data for Big Elk Creek, so the main effort will be the data processing for the assessment. The procedure used would include creating buffers around the NHD flowlines. The buffers will be used to extract the LIDAR data. Next, procedures already available from ODEQ to identify vegetation height from the LIDAR will be used to identify riparian areas with animal traffic and to identify structures. Then the areas and structures identified from the LIDAR data will be converted to vector data (polygons and lines). Finally, the HEM tool will be used to create events on the NHD for the vector data. The main products from this work would be the vector data on the NHD (the hydrographic events), the interim LIDAR and vector data, and a documented procedure (as code if possible) used to create the

data.

Feel free to contact me if you have any questions. This work can potentially used throughout the Mid-Coast and would greatly aid the implementation of the Bacteria TMDL.

Cheers,
Kevin Brannan
Natural Resource Specialist
811 SW 6th Ave
Portland, OR 97204
Phone: 503-229-6629
Email: brannan.kevin@deq.state.or.us<mailto:brannan.kevin@deq.state.or.us>